

Application No. 09/609,269  
Amendment "D" dated July 6, 2005  
Reply to Office Action mailed May 23, 2005

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### AMENDMENTS TO THE CLAIMS

The listing of claims replaces all prior versions, and listings, of claims in the application:

#### Listing of Claims:

1. (Currently Amended) In a gateway computer system coupled between at least one computer system and at least one remote wireless system, a method of the gateway computer system dynamically converting data from a first format as received at the gateway computer system from an originating computer system into a second data format compatible with a remote ~~computer-wireless system-device~~ prior to transmitting the data to the remote wireless system so that the remote ~~computer-wireless system-device~~ does not have to convert the data into the second data format, the method comprising:

receiving a message from an originating computing system that includes data in a first data format and that is intended for a remote wireless ~~system-device~~ that has an associated telephone number;

examining the message and identifying the telephone number of the remote wireless device, which is included as part of the message;

determining, based in part on the telephone number, that the wireless ~~system~~ device only recognizes data in one or more formats that are different than the first data format;

identifying a sequence of format conversion modules that, when executed in sequence, converts the data from the first data format into a second data format that is recognized by the ~~remote wireless devicesystem~~, wherein identifying is based on the telephone number associated with the remote wireless ~~system~~ device;

converting the data from the first data format into an intermediate data format using a first format conversion module in the sequence of data conversion modules; and

converting the data from the intermediate data format into the second data format using at least one second format conversion module in the sequence of ~~data-format~~ conversion modules, each of the second format conversion modules converting the data into different formats;

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upon converting the data to the second data format, transmitting the data to the remote wireless ~~system~~device.

2. (Cancelled)

3. (Previously Presented) A method in accordance with Claim 1, further including identifying the first data format by reading a content type field associated with the data.

4. (Currently Amended) A method in accordance with Claim 1, wherein the act of identifying the ~~second data format~~ comprises the following:

an act of reading the telephone number from a destination address field associated with the data;

an act of querying a database for a data format recognized by the remote ~~computer wireless system~~device that is represented by the destination address within the destination address field; and

an act of determining that the resulting data format returned from database is the second data format.

5. (Cancelled).

6. (Previously Presented) A method in accordance with Claim 1, wherein the originating computer system comprises a server computer system.

7. (Original) A method in accordance with Claim 1, wherein the originating computer system comprises a wireless device.

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8. (Currently Amended) A method in accordance with Claim 7, wherein the remote ~~computer wireless system device~~ comprises a server computer system.

9-10. (Cancelled).

11. (Currently Amended) A method in accordance with Claim 1, further comprising the following:

an act of receiving the data using a first protocol module that is compatible with receiving data from the originating computer system; and

an act of determining a second protocol module that is compatible with delivering data to the remote ~~computer wireless system device~~; and

an act of transmitting the converted data to the remote ~~computer system wireless device~~ using the second protocol module.

12. (Currently Amended) A method in accordance with Claim 1, further comprising the following:

an act of receiving the data using a first network driver module that is compatible with receiving data from the originating computer system; and

an act of determining a second network driver module that is compatible with delivering data to the remote ~~computer wireless system device~~; and

an act of transmitting the converted data to the remote ~~computer system wireless device~~ using the second network driver module.

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13. (Currently Amended) A computer program product for use in a gateway computer system coupled between at least one originating computer system and at least one remote wireless system, the computer program product for implementing a method of dynamically converting data from a first format as received at the gateway computer system from an originating computer system into a second data format compatible with a remote ~~computer~~ wireless system prior to transmitting the data to the remote ~~computer-wireless~~ system so that the remote wireless ~~system-device~~ does not have to convert the data into the second data format, the computer program product comprising a computer-readable medium having computer-executable instructions for performing the following:

receiving a message from an originating computing system that includes data in a first data format and that is intended for a remote wireless ~~system-device~~ that has an associated telephone number;

examining the message and identifying the telephone number of the remote wireless device, which is included as part of the message;

determining, based in part on the telephone number, that the remote wireless devicesystem only recognizes data in one or more formats that are different than the first data format;

identifying a sequence of format conversion modules that, when executed in sequence, converts the data from the first data format into a second data format that is recognized by the remote wireless devicesystem, wherein identifying is based on the telephone number associated with the remote wireless ~~system-device~~;

converting the data from the first data format into an intermediate data format using a first format conversion module in the sequence of data conversion modules; and

converting the data from the intermediate data format into the second data format using at least one second format conversion module in the sequence of ~~data-format~~ conversion modules, each of the second format conversion modules converting the data into different formats;

upon converting the data to the second data format, transmitting the data to the remote wireless ~~system-device~~.

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14. (Original) A computer-program product in accordance with Claim 13, wherein the computer-readable medium comprises a physical storage medium.

15. (Cancelled)

16. (Previously Presented) A computer-program product in accordance with Claim 13, wherein the act of identifying the first data format comprises an act of reading a content type field associated with the data.

17. (Previously Presented) A computer-program product in accordance with Claim 13, wherein identifying the second data format comprises:

an act of reading the telephone number from a destination address field associated with the data;

an act of querying a database for a data format recognized by the remote computer system that is represented by the destination address within the destination address field; and

an act of determining that the resulting data format returned from database is the second data format.

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18. (Currently Amended) A computer-program product in accordance with Claim 13, further comprising computer-executable instructions for performing the following:

an act of receiving the data using a first protocol module that is compatible with receiving data from the originating computer system; and

an act of determining a second protocol module that is compatible with delivering data to the remote ~~computer system~~ wireless device; and

an act of transmitting the converted data to the remote ~~computer system~~ wireless device using the second protocol module.

19. (Currently Amended) A computer-program product in accordance with Claim 13, further comprising computer-executable instructions for performing the following:

an act of receiving the data using a first network driver module that is compatible with receiving data from the originating computer system; and

an act of determining a second network driver module that is compatible with delivering data to the remote ~~computer system~~ wireless device; and

an act of transmitting the converted data to the remote ~~computer system~~ wireless device using the second network driver module.

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20. (Currently Amended) In a gateway computer system coupled between at least one originating computer system and at least one remote wireless system, a method of the gateway computer system dynamically converting data in a first format as received at the gateway computer system from an originating computer system into a second data format compatible with a ~~remote computer system~~wireless device prior to transmitting the data to the remote wireless ~~system device~~ so that the remote ~~computer system~~wireless device does not have to convert the data into the second data format, the method comprising the following:

receiving a message from data in a first data format from an originating computing system that includes data in a first data format and that is intended for a remote wireless ~~system device~~ that has an associated telephone number ~~that is addressed to a remote computer system~~;

examining the message and identifying the telephone number of the remote wireless device, which is included as part of the message;

determining, based in part on the telephone number, that the remote wireless device only recognizes data in one or more formats that are different than the first data format;

an act of identifying a plurality of sequences of format conversion modules that each, when executed in sequence, converts the data from the first data format into a second data format comprising a format that the remote wireless device recognizes, wherein identifying the plurality of sequences is based on the telephone number associated with the remote wireless ~~system~~device; and

a step for converting the data from the first data format into the second data format using one of the plurality of the sequences of format conversion modules; and upon converting the data to the second data format, transmitting the data to the remote wireless ~~system~~device.

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21. (Previously Presented) A method in accordance with Claim 20, wherein the step for converting the data from the first data format into the second data format comprises the following:

an act of converting the data from the first data format into an intermediate data format using the first format conversion module in the one of the plurality of sequences of data conversion modules; and

an act of converting the data from the intermediate data format into the second data format using at least the second format conversion module in the one of the plurality of sequences of data conversion modules.

22. (Cancelled)

23. (Previously Presented) A method in accordance with Claim 20, wherein the first data format is identified from a content type field associated with the data.

24. (Previously Presented) A method in accordance with Claim 20, wherein the act of identifying the second data format comprises the following:

an act of reading the telephone number from a destination address field associated with the data;

an act of querying a database for a data format recognized by the remote computer system that is represented by the destination address within the destination address field; and

an act of determining that the resulting data format returned from database is the second data format.

25. (Cancelled).



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26. (Previously Presented) A method in accordance with Claim 20, wherein the originating computer system comprises a server computer system.

27. (Original) A method in accordance with Claim 20, wherein the originating computer system comprises a wireless device.

28-29. (Cancelled).

30. (Currently Amended) A method in accordance with Claim 20, wherein the originating computer system and the remote wireless device~~computer systems~~ both comprise server computer systems.

31. (Currently Amended) A method in accordance with Claim 20, further comprising the following:

an act of receiving the data using a first protocol module that is compatible with receiving data from the originating computer system; and

an act of determining a second protocol module that is compatible with delivering data to the remote ~~computer system~~wireless device; and

an act of transmitting the converted data to the remote ~~computer system~~wireless device using the second protocol module.

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32. (Currently Amended) A method in accordance with Claim 20, further comprising the following:

an act of receiving the data using a first network driver module that is compatible with receiving data from the originating computer system; and

an act of determining a second network driver module that is compatible with delivering data to the remote ~~computer system~~wireless device; and

an act of transmitting the converted data to the remote ~~computer system~~wireless device using the second network driver module.

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33. (Currently Amended) A computer program product for use a gateway computer system coupled between at least one originating computer system and at least one remote wireless system, the computer program product for implementing a method of dynamically converting data in a first format as received from an originating computer system into a second data format compatible with a remote ~~computer system~~ wireless device prior to transmitting the data to the remote ~~wireless system device~~ so that the remote ~~computer system~~ wireless device does not have to convert the data into the second data format, the computer program product comprising a computer-readable medium having computer-executable instructions for performing the following:

receiving a message from data in a first data format from an originating computing system that includes data in a first data format and that is intended for a remote ~~wireless system device~~ that has an associated telephone number ~~that is addressed to a remote computer system~~;

examining the message and identifying the telephone number of the remote wireless device, which is included as part of the message;

determining, based in part on the telephone number, that the remote wireless device only recognizes data in one or more formats that are different than the first data format;

an act of identifying a plurality of sequences of format conversion modules that each, when executed in sequence, converts the data from the first data format into a second data format comprising a format that the remote wireless device recognizes, wherein identifying the plurality of sequences is based on the telephone number associated with the remote wireless devicesystem; and

a step for converting the data from the first data format into the second data format using one of the plurality of the sequences of format conversion modules; and upon converting the data to the second data format, transmitting the data to the remote wireless system.

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34. (Original) A computer-program product in accordance with Claim 33, wherein the computer-readable medium comprises a physical storage medium.

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35. (Currently Amended) A gateway computer system configured to be coupled between at least one originating computer system and at least one remote wireless system, the gateway computer system configured to receive data having a first data format from an originating computer system and then to subsequently transmit the data in a second format to a remote wireless system such that the remote wireless system does not have to convert the data into the second data format, the gateway computer system comprising:

means for receiving a message from data in a first data format from an originating computing system that includes data in a first data format and that is intended for a remote wireless system device and that has an associated telephone number ~~that is addressed to a remote computer system~~;

means for examining the message and identifying the telephone number of the remote wireless device, which is included as part of the message;

means for determining, based in part on the telephone number, that the remote wireless device only recognizes data in one or more formats that are different than the first data format;

means for identifying an address of the remote ~~computer system~~ wireless device to which the data is addressed;

a plurality of format conversion modules including:

a plurality of first format conversion modules configured to convert data having the first data format into intermediate data formats; and

a plurality of second format conversion modules configured to convert data having the intermediate data formats into a second data format comprising a format that the remote wireless device recognizes; and

means for identifying different sequences of first and second format conversion modules that are a subset of the plurality of format conversion modules and that, when executed in sequence, result in the data being converted from the first data format into the second data format, wherein identifying the different sequences is based upon the telephone number associated with the remote wireless ~~system~~ device.

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36. (Original) The gateway computer system in accordance with Claim 35, wherein the originating computer system comprises a server computer system.

37. (Cancelled).

38. (Original) The gateway computer system in accordance with Claim 35, wherein the originating computer system comprises a wireless device.

39. (Currently Amended) The gateway computer system in accordance with Claim 38, wherein the remote ~~computer system~~wireless device comprises a server computer system.

40. (Cancelled).

41. (Currently Amended) The gateway computer system in accordance with Claim 35, wherein the originating computer system and the remote wireless device~~computer systems~~ both comprise a server computer ~~system~~systems.

42. (Previously Presented) A method as recited in claim 1, wherein the act of identifying the sequence is based on an amount of time it will take to convert the data from the first data format into the second data format.

43. (Previously Presented) A method as recited in claim 20, wherein the step for converting the data from the first data format into the second data format using one of the plurality of the sequences includes selecting the one of the plurality of sequences based on an amount of time it will take to convert the data from the first data format into the second data format.

44. (Currently Amended) A method as recited in claim 1, wherein the second data format corresponds to a network protocol that is proprietary with the remote ~~computer system~~wireless device.

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45. (Currently Amended) A method as recited in claim 1, wherein the address of the remote computer system is provided to the gateway when the remote ~~computer system~~wireless device registers with the gateway.

46. (Previously Presented) A method as recited in claim 1, wherein the address comprises a telephone number.

47. (Cancelled).

48. (New) A method as recited in claim 1, wherein the message that is converted from the first format into the second format traverses network OSI layers during the conversion of the message and such that network and protocol translation occurs to the message in addition to data conversion.

49. (New) A method as recited in claim 1, wherein the message that is converted from the first format into the second format is converted in a presentation level 6 of a standard OSI layers model.

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